

24. A process for curing a coating composition according to claim 10 wherein the latent hydroxyl groups of the bicyclo-orthoester groups are deblocked in the presence of water, optionally in the presence of a first catalyst, and reacted with the hydroxyl reactive groups of the first and/or second compound, optionally in the presence of a second catalyst.

REMARKS

Applicants thank the Examiner for allowing them to amend their response. In light of the Examiner's Communication dated May 20, 2002, Applicants have reviewed the pending claims and as amended, believe they address all the Examiner's concerns. These amendments were made as to form and not as to patentability. Support for the amendments can be found in the specification and the claims. The version with markings to show changes made submitted herewith has been reviewed and conforms to the amendments made in the Amendment and Response mailed February 11, 2002 along with the clarifying amendments made herewith. If the Examiner requires another version with markings to show changes made showing only the changes made in the February 11th submission, the Applicants will provide a copy.

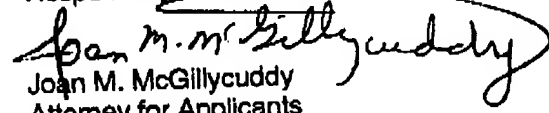
As far as proper Markush language is concerned, "comprising" has been removed and the claims more clearly defined. Applicants believe that as amended, the definition of the other R1 and R2 and B, is clear.

In view of the amendments and remarks herein and the papers submitted previously, Applicants respectfully request reconsideration and

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withdrawal of the subject rejections. The present application is believed to be
in condition for allowance, which action is respectfully requested.

Respectfully submitted,


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Version with markings to show changes madePlease amend the claims as follows:

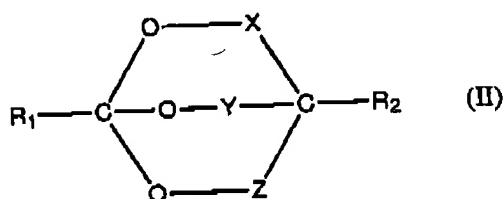
1. A coating composition comprising a compound comprising at least one [BOE] bicyclo-orthoester group having latent hydroxyl groups and at least one [other] hydroxyl reactive functional group represented by the following formula I



wherein

x and y are independently selected from 1 to 10;

A has the structure according to the following formula II



wherein

X and Z are independently from each other selected from linear or branched alk(en)ylene groups with 1-4 carbon atoms optionally containing an oxygen or a nitrogen atom;

Y is nothing or is selected independently of X and Z from linear or branched alk(en)ylene groups with 1-4 carbon atoms optionally containing an oxygen or a nitrogen atom;

one of R₁ and R₂ is [selected from the group of] a monovalent radical[s] of [comprising] hydrogen, hydroxyl, or alk(en)yl groups having [comprising] 1-30 carbon atoms which [may be] are linear or branched and [may] optionally contains [one or more hetero atoms and groups selected from the group of] oxygen atoms, nitrogen atoms, sulphur atoms, and/or ester groups;

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the other of R₁ and R₂ is [selected from the group of] a divalent radical[s] with [comprising] alk(en)ylene groups having 1-10 carbon atoms which groups [may be] are linear or branched and optionally contain [one or more hetero atoms and groups selected from the group of] oxygen atoms, nitrogen atoms, sulphur atoms, and/or ester groups;

B is [selected from the group of] a divalent radical[s] [comprising] of aromatic, aliphatic, cycloaliphatic, and araliphatic hydrocarbon groups having 1-40 carbon atoms which groups [may be] are linear or branched and optionally contain [one or more hetero atoms and groups selected from the group of] oxygen atoms, nitrogen atoms, sulphur atoms, phosphorus atoms, sulphone groups, sulphoxy groups, amine groups, amide groups, urea groups, urethane groups, and/or ester groups;

-ester groups;

ether groups;

amide groups;

thioester groups;

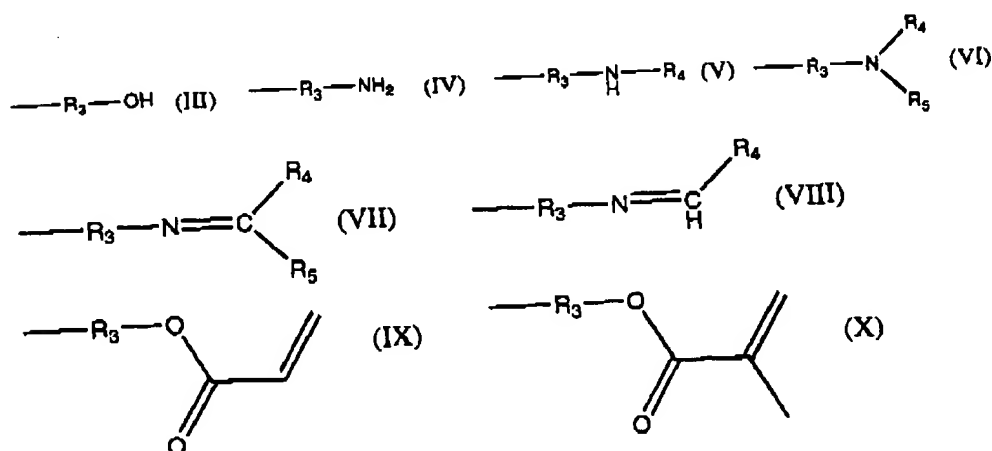
thioamide groups;

urethane groups; and

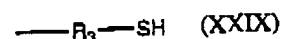
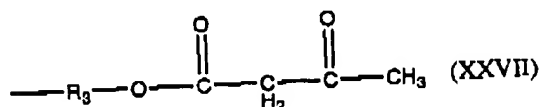
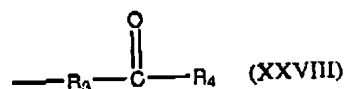
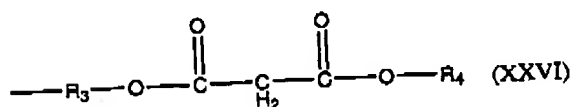
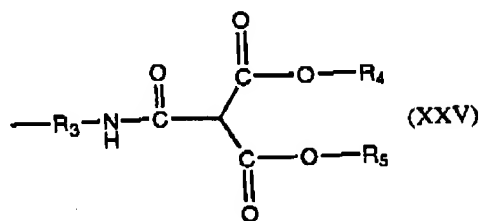
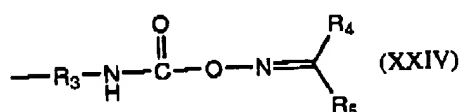
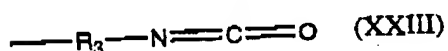
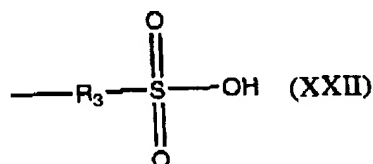
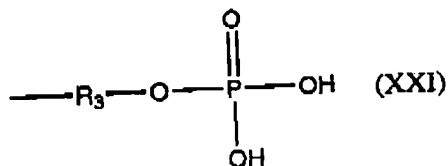
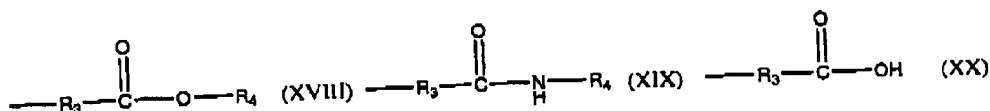
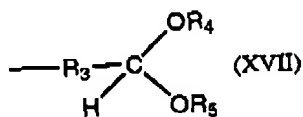
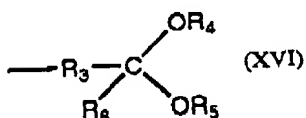
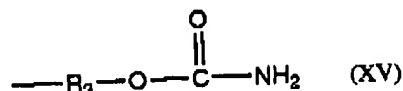
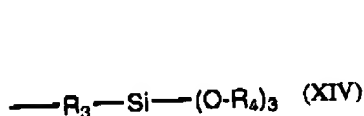
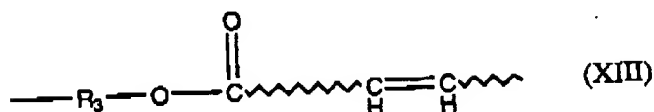
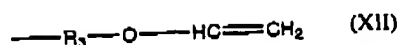
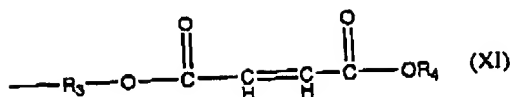
urea groups;

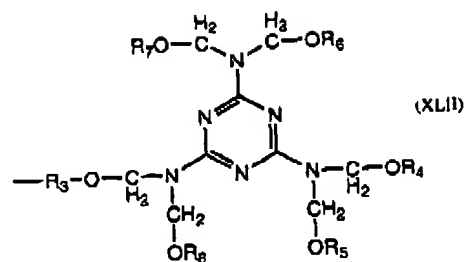
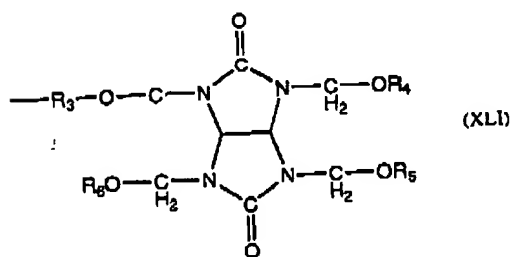
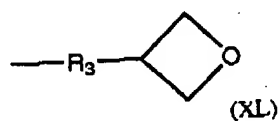
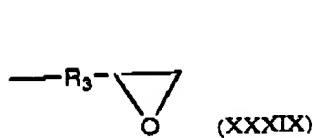
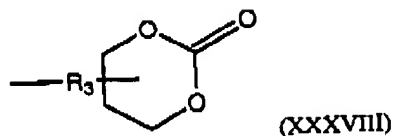
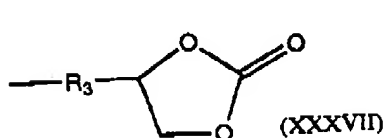
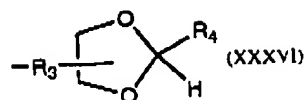
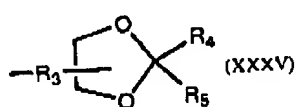
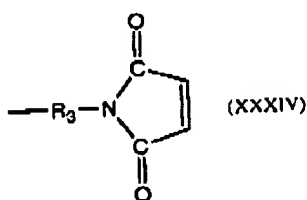
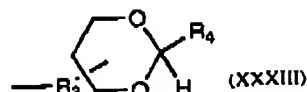
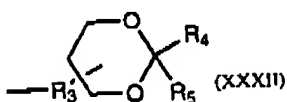
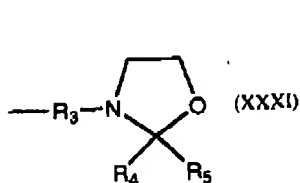
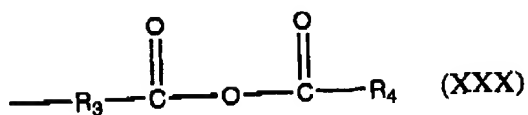
C is a hydroxyl reactive functional group selected from the following formulae:

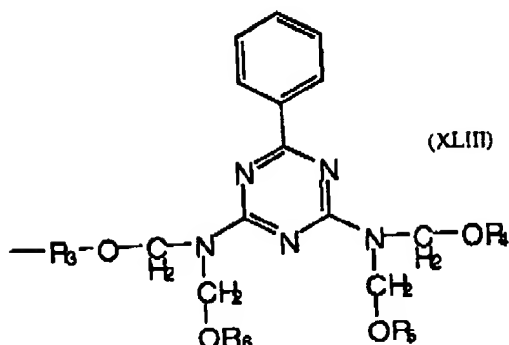
[III-XLIII]



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wherein R_3 is selected from the group of alk(en)ylene groups having 1-10 carbon atoms which groups [may be] are linear or branched and [may] optionally contain one or more [groups selected from the group of] ether, ester, urea, urethane, amide, and amine groups, and R_4 , R_5 , R_6 , R_7 and R_8 are independently from each other selected from the group of alk(en)yl groups having 1-10 carbon atoms which groups [may be] are linear or branched.

10. A coating composition [according to claim 1 wherein the coating composition comprises a second compound comprising at least two hydroxyl-reactive groups selected from the group of isocyanate, epoxy, acetal, carboxyl, anhydride, and alkoxy silane groups, or the second compound is an amino resin.] comprising a compound comprising at least one bicyclo-orthoester group having latent hydroxyl groups and at least one other functional group represented by the following formula

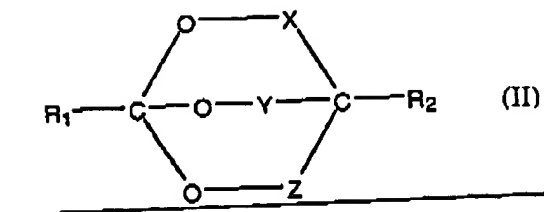
1



wherein

x and y are independently selected from 1 to 10;

A has the structure according to the following formula II



wherein

X and Z are independently from each other selected from linear or branched alk(en)ylene groups with 1-4 carbon atoms optionally containing an oxygen or a nitrogen atom;

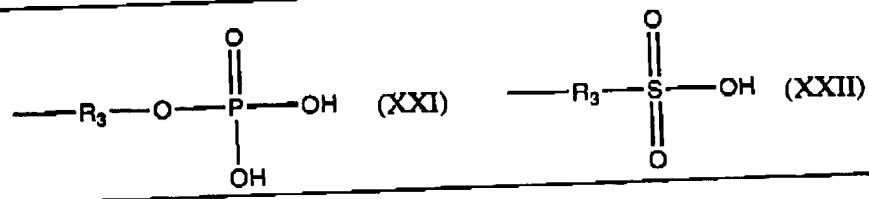
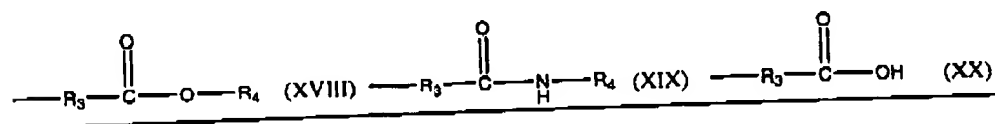
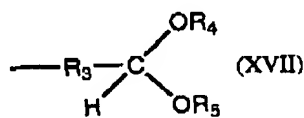
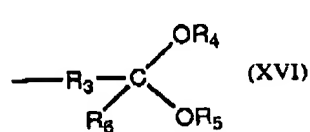
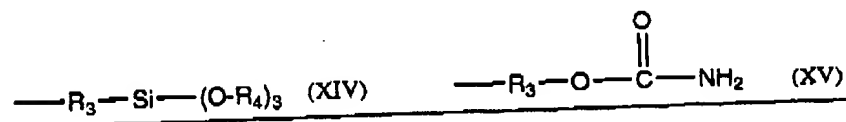
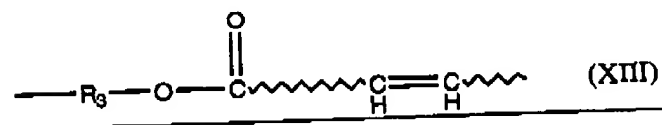
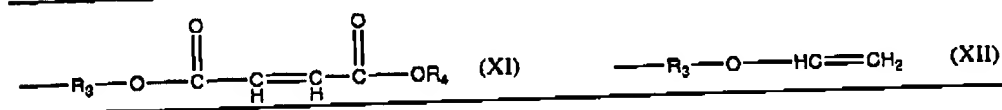
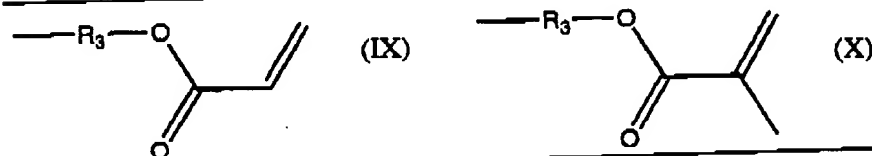
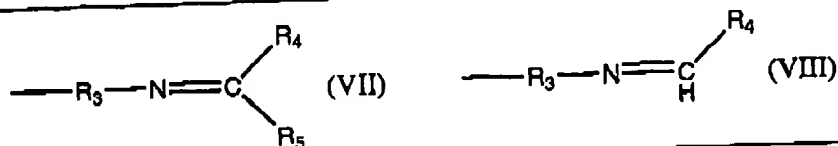
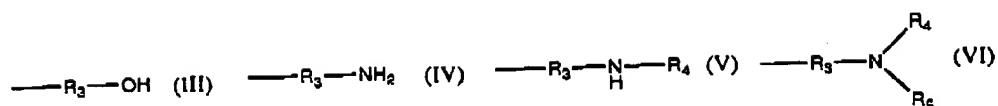
Y is nothing or is selected independently of X and Z from linear or branched alk(en)ylene groups with 1-4 carbon atoms optionally containing an oxygen or a nitrogen atom;

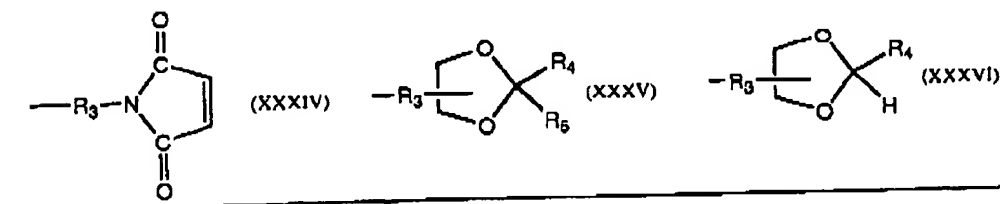
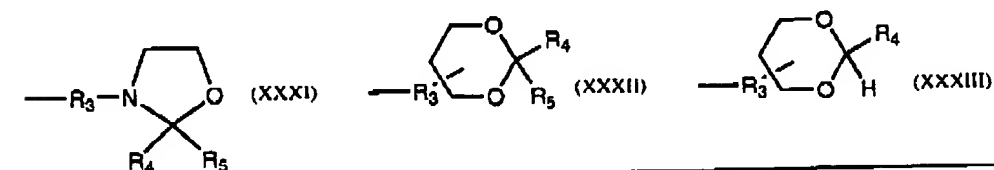
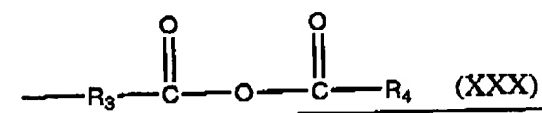
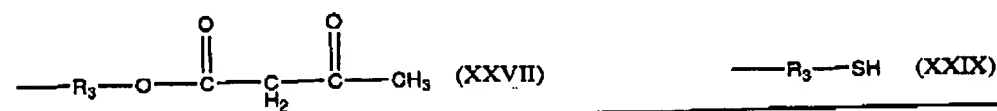
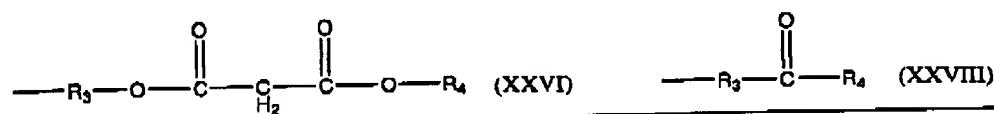
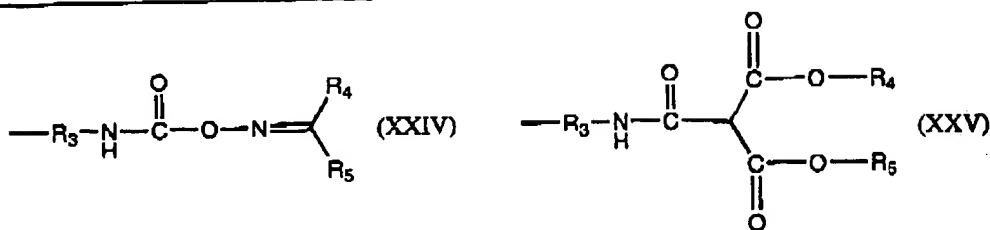
one of R₁ and R₂ is a monovalent radical of hydrogen, hydroxyl or alk(en)yl groups 1-30 carbon atoms which are linear or branched and optionally contains oxygen atoms, nitrogen atoms, sulphur atoms, and/or ester groups;

the other of R₁ and R₂ is a divalent radical with alk(en)ylene groups having 1-10 carbon atoms which groups are linear or branched and optionally contain oxygen atoms, nitrogen atoms, sulphur atoms, and/or ester groups;

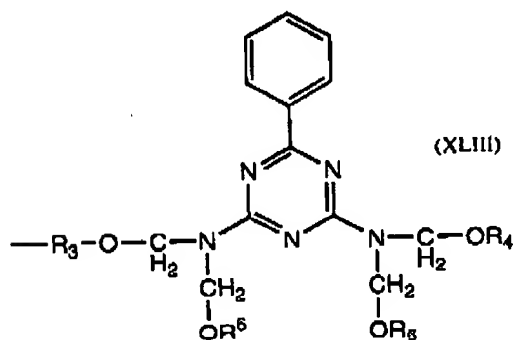
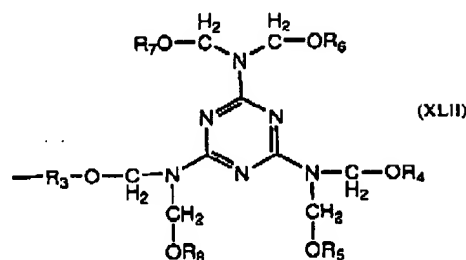
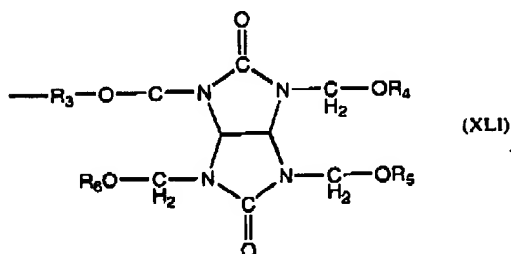
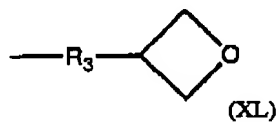
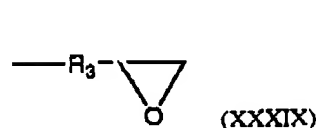
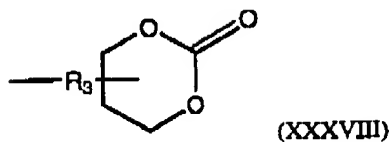
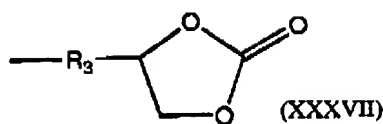
B is a divalent radical of aromatic, aliphatic, cycloaliphatic, and araliphatic hydrocarbon groups having 1-40 carbon atoms which groups are linear or branched and optionally contain oxygen atoms, nitrogen atoms, sulphur atoms, phosphorus atoms, sulphone groups, sulphony groups, amine groups, amide groups, urea groups, urethane groups, and/or ester groups;
-ester groups; ether groups; amide groups; thioester groups; thioamide groups; urethane groups; and urea groups;

C is a functional group selected from the following formulae:

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wherein R₃ is an alk(en)ylene group having 1-10 carbon atoms which groups are linear or branched and optionally contain ether, ester, urea, urethane, amide, and/or amine groups, and R₄, R₅, R₆, R₇ and R₈ are independently from each other selected from alk(en)yl groups having 1-10 carbon atoms which groups are linear or branched, wherein the coating composition comprises a second

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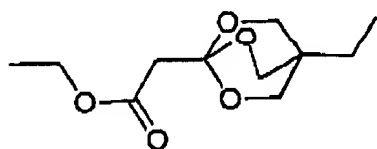
compound comprising at least two hydroxyl reactive groups of isocyanate, epoxy, acetal, carboxyl, anhydride, and/or alkoxy silane groups, or the second compound is an amino resin.

11. A coating composition according to claim 10, wherein the [hydroxyl-reactive compound is] second compound comprising at least two hydroxyl reactive groups is an aliphatic, cycloaliphatic or aromatic compound comprising at least two isocyanate groups or adducts thereof.

12. A coating composition according to claim 11 wherein the second compound comprising at least two hydroxyl reactive groups is an isocyanurate.

13. A process for curing a coating composition according to claim 1 wherein the latent hydroxyl groups of the bicyclo-orthoester groups are deblocked in the presence of water, optionally in the presence of a first catalyst, and reacted with the hydroxyl-reactive groups of the [first and/or second] compound, optionally in the presence of a second catalyst.

14. A process for the preparation of a compound comprising at least one [BOE] bicyclo-orthoester group and at least one other functional group according to the formula



in which a compound having at least one corresponding oxetane group is converted in the presence of a catalytic amount of dibutyl tin oxide at a temperature above 180°C.